CLEAN LISTING OF THE CLAIMS FOR CONVENIENCE

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method of operating a gas turbine power plant wherein the power plant is comprised of:

a first gas turbine group, comprised of a first compressor and a first turbine which are connected mechanically with one another,

a second gas turbine group comprised of a combustion device, which is placed in a gas flow stream between the first group's first compressor and first turbine, a second compressor, a fuel injection device, a combustion chamber and a second turbine, the second gas turbine group's second compressor and second turbine are mechanically coupled to one another,

at least one of the first and second gas turbine groups having a device for extraction of useful work,

the method comprising:

producing flue gas from the first turbine and heating a first flow of water and/or steam with heat from the flue gas from the first group's turbine, compressing the gas stream from the first turbine in the first compressor, using heat from the compressed gas stream for heating further amounts of water and/or steam with heat from the gas stream that is compressed by the first group's first compressor,

injecting the produced water and/or steam into the gas flow stream in such amounts that at least 60% of the oxygen content of the air in the gas flow stream is consumed through combustion in the combustion device, and

feeding combustion gas into the second turbine of the second gas turbine group at a pressure in the range 50-300 bar.

2. (Currently Amended) A method according to claim 1, further comprising injecting the further amount of water into the gas stream between the first group's first compressor and the second gas turbine group's second compressor.

3. (Currently Amended) A method according to claim 2, wherein the further amounts of water that entirely or partially have the form of steam optionally are introduced in the gas stream downstream of the second gas turbine group's compressor, and are introduced in such amounts that at least 60% of the oxygen content of the air in the gas stream is consumed through combustion in the combustion device.

4. (Currently Amended) A method according to claim 1, further comprising choosing operational characteristics such that the temperature of the gas flow entering the first gas turbine group's first turbine is at most 1200°C and the pressure of the gas flow is between 5-60 bar.

5. (Currently Amended) A method according to claim 1, further comprising choosing operational characteristics that cause a flue gas exit temperature from the first gas turbine group's first turbine in the range of 200-500°C.

6. (Currently Amended) A method according to claim 1, wherein the first gas turbine group comprises a gas turbine unit, which is optimized for non-humidified operation, wherein the gas turbine unit has one or multiple shafts and includes intercooling

7. (Currently Amended) A method according to claim 1, further comprising arranging and operating the second gas turbine group's second turbine so that the pressure of the gas stream from the first gas turbine group's first compressor and to the first gas turbine group's first turbine, respectively, is re-allotted such that the first gas turbine group is well-suited to operate with the media and flow data associated with humidified cycles.

8. (Currently Amended) A method according to claim 6, further comprising regulating inlet guide vanes of the first compressor of the first gas turbine group to reduce the flow

of air obtained during operation of the power plant, and reducing the capacity of the first gas turbine group's first compressor through removing one or more compressor stages thereof.

9. (Currently Amended) A method according to claim 1, further comprising complementing the first gas turbine group's first compressor with an extraction device and operating the extraction device to extract the compressed air, which is sealed against the axle, and complementing the first gas turbine group's first turbine with an injection device, which is also sealed against the axle, and returning the flue gas by injection into the first gas turbine group's first turbine.

10. (Currently Amended) A method according to claim 1, further comprising:

choosing an exit temperature of the first gas turbine group's first compressor to enable production of steam of sufficiently high pressure to be used to cool at least one of the second turbine and the combustion chamber of the second gas turbine group.

11. (Currently Amended) A method according to claim 1, further comprising introducing combustion gases into the second gas turbine group's second turbine, the combustion gases having a pressure in the region of 50-300 bar and a temperature in the region of 1000-2000 K.

12. (Currently Amended) A method according to claim 1, further comprising humidifying the gas exit flow from the second gas turbine group's second compressor prior to the second gas turbine group's combustion device, by passing at least a part of the gas flow through a humidifier, heat exchanging inlet and outlet gas streams from the heat exchanger via a recuperator, where inlet water to the humidifier is heated with heat from the gas outlet stream from at least one of the first compressor and the turbine of the first gas turbine group.

13. (Currently Amended) A method according to claim 1, further comprising using at least a part of a water content of the flue gases to provide the process with at least one of feed water and steam.

14. (Currently Amended) A method according to claim 1, further comprising regulating the output of work from the process through changing the amount of water that is transferred to the gas stream, whereby a lower power output is obtained through a lower degree of humidification.

15. (Currently Amended) A method according to claim 1, further comprising introducing at least a part of the steam used for cooling into the gas stream after use for cooling, in the second gas turbine group's combustion chamber, for further use as the working fluid.

16. (Currently Amended) A method according to claim 1, wherein no significant amount of heat is transferred to the gas stream between the second gas turbine group's second turbine and the first group's first turbine.

17. (Currently Amended) A method according to claim 1, further comprising regulating the second gas turbine group's second compressor by regulating a lead guide vane or by regulating rotational speed.

18. (Currently Amended) A method according to claim 1, wherein at least 10% of the useful work obtained from the process is extracted via a transmission of the second gas turbine group.

19. (Currently Amended) A method according to claim 1, further comprising

arranging a heat exchanger in the hot air flow downstream of the first compressor of the first gas turbine group, and flowing water through the heat exchanger for heating of the water,

preheating the water in an exhaust gas heat exchanger upstream of a flue gas condenser from which the exhaust gas is exhausted from the first gas turbine group to the

environment, producing the water by the flue gas condenser and heating a part flow of the water, in a preheated condition, by a heat exchanger, wherein the water is passed by flue gas from the first turbine of the first gas turbine group, wherein the water which is heated by the heat exchangers is at least partially transformed into steam, and the water is fed into one of the combustion chamber, the second turbine of the second gas turbine group or the compressed gas flow from the compressor of the second gas turbine group, for cooling the second turbine of the second gas turbine group.

20. (Currently Amended) A method according to claim 19, wherein the water, which is fed into the combustion chamber, at least partially has the form of steam.

21. (Currently Amended) A method according to claim 19, further comprising producing steam by an external boiler and feeding the produced steam into one of the combustion chamber, the second turbine of the second gas turbine group or the compressed gas flow from the compressor of the second gas turbine group, for cooling of the second turbine of the second gas turbine group.